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RSWM Limited
Kharigram



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WE WELCOME YOU TO RSWM LTD. KHARIGRAM



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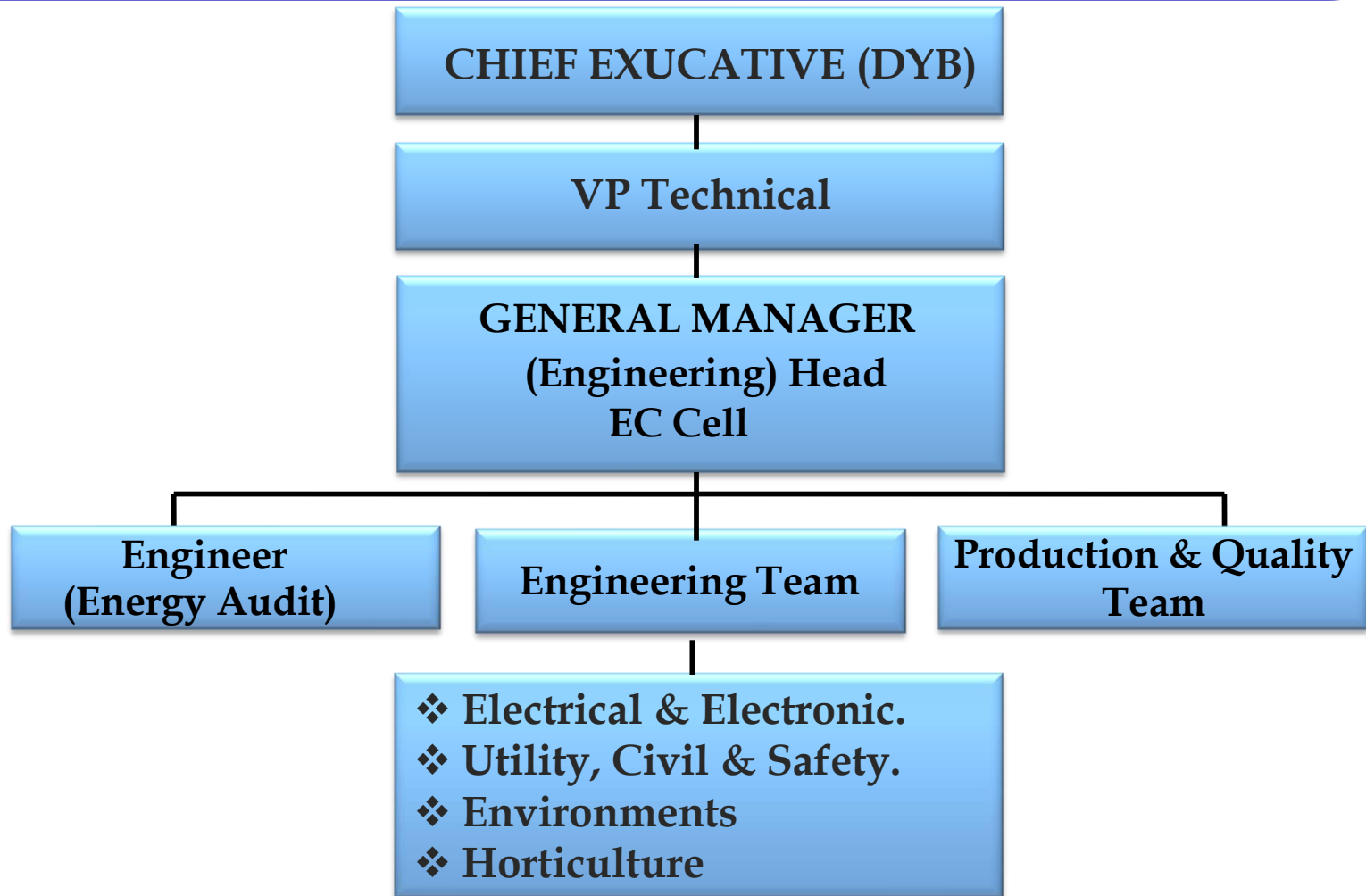
Unit Profile

RSWM Limited is the Flagship Company of the LNJ BHILWARA group of industries. The company comprises the spinning units. The first spinning unit of the company at Kharigram was set up in 1973 with an initial installed capacity of 8640 spindles. Since then it has grown to a modern complex of 83936 spinning spindles, cotton, dyeing processing house. The Annum turn over of the company is Rs. 249 Crore/- The product mix includes cotton yarn, synthetic / blended yarns, industrial yarns.

The company has achieved great success in the area of productivity, quality, cost effectiveness and energy conservation under the leadership of Hon'ble **SYT. L.N. JHUNJHUNWALA** Chairman of the company and **Shri Prakash Maheshwari Chief Executive {DYB}** The philosophy of RSWM Limited is to concentrate all efforts and resources in achieving perfection in operational performance. The standards of productivity, work practices, cost per spindle, quality parameters have all been praised by many textile research institutes in their various comparative surveys of industry, performance is therefore reflected in the balance sheet of the company and the success in export. In the area of energy conservation, continuous efforts have led to substantial savings in Plant. It is a matter of great pride / admiration that RSWM unit Kharigram awarded ISO -9000/2000 in the year 1994, EMS 14001 in year 2006 and recently achieved Shri Rajeev Gandhi national quality award year 2007.



Energy Conservation Cell Organization Set Up





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Vision

To look in to every aspect of energy conservation in terms of power, water, steam & environment so that optimum utilization can be generated through proper monitoring in order to achieve the target of productivity along with quality by reduction of existing consumption, which will help to organization first.

5 E'S:

- ❖ ENERGY CONSERVATION & SAVING
- ❖ ENERGY EFFICIENCY
- ❖ ENERGY MONITORING
- ❖ ENERGY CONSERVATION IMPLIMENTED PROJECT REVIEW
- ❖ ENERGY MONTHLY MEETING AND DOCUMENTATION



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Energy Conservation Policy

Energy conservation cell is committed to demonstrate excellence in Energy Management Performance on a continual basis.

To achieve this, we are committed for -

- ❖ Monitoring and control of energy consumption through effective energy management system periodic energy audits.
- ❖ Continuous new technology Upgradation of process with energy efficient and eco -friendly technology to optimize the energy cost and contribute profitability in company.
- ❖ Promoting and propagating energy awareness among all the employees.
- ❖ Bench marking our performance with the best and endeavoring to be ahead in the our group unit & world.

*PRAKASH MAHESHWARI
CHIEF EXUCATIVE (DYB)*



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Environments & Safety

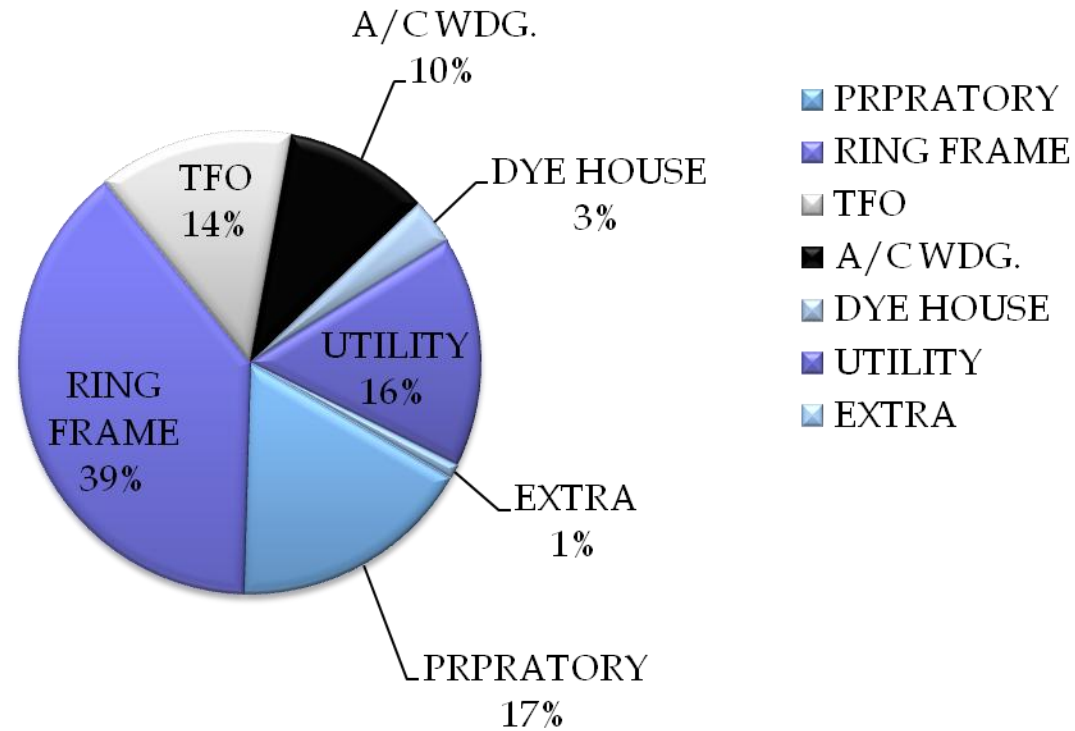
Besides energy conservation programs the company also give due attention to keep the environment healthy. The company has given special priority for development of green belt / park etc. Plantation of trees is done inside the mill premises. Effluent treatment plant is being maintained for dye - house as per norms of state pollution control board and we have certified EMS 14001 System year 2006.

Committed to safety of manpower, the company has formed a safety committee headed by **Vice president Technical** . The safety team closely monitors the safety-related problems in the unit and provides adequate solution to overcome them. All electrical installation is maintained as per Indian elect. Rules. The unit is fully covered with a network of hydrant/sprinklers/fire extinguishers. All pressure vessels are being tested regularly. Shock treatment charts are being displayed at various locations.



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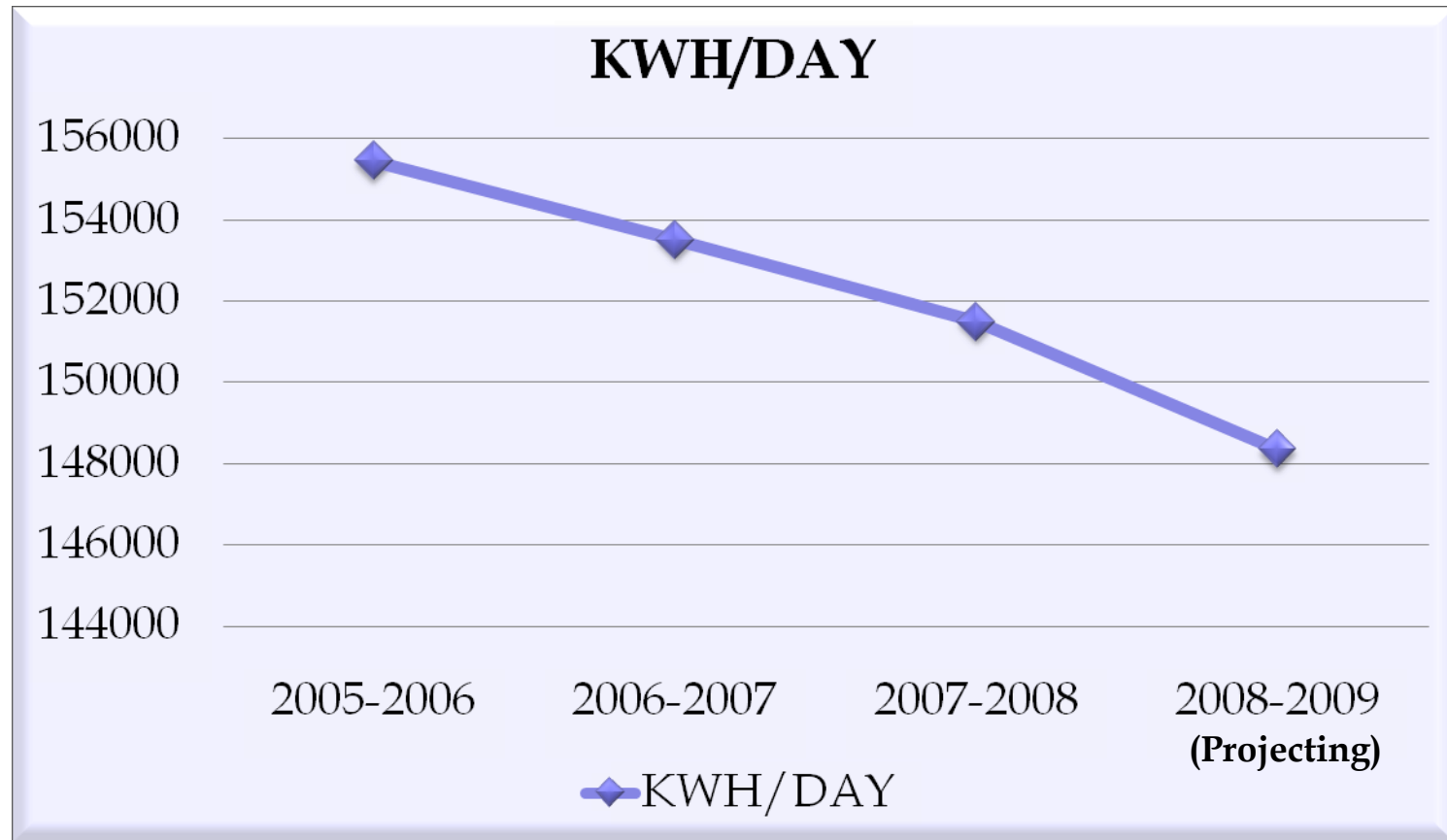
Kharigram Unit Power Consumption Diagram





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Energy Consumptions Trend 2005-2008

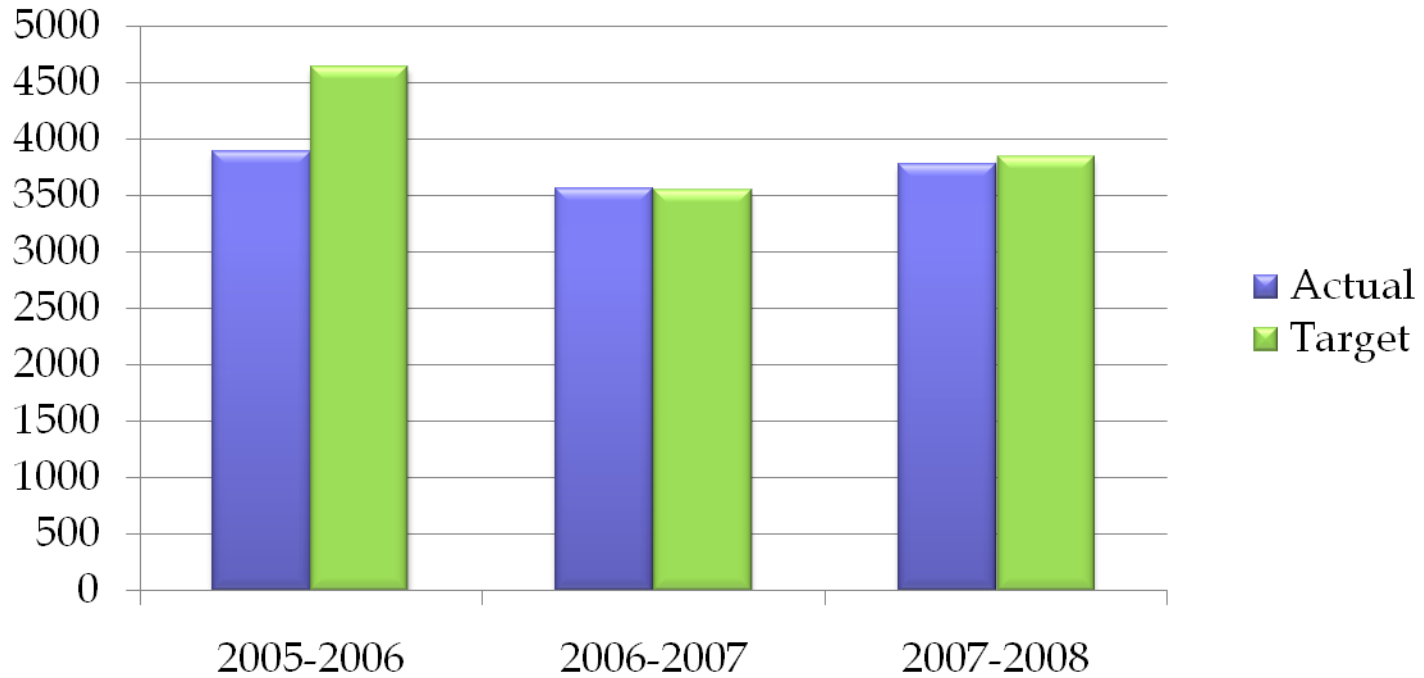




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Kwh / Tone, Target Vs Actual

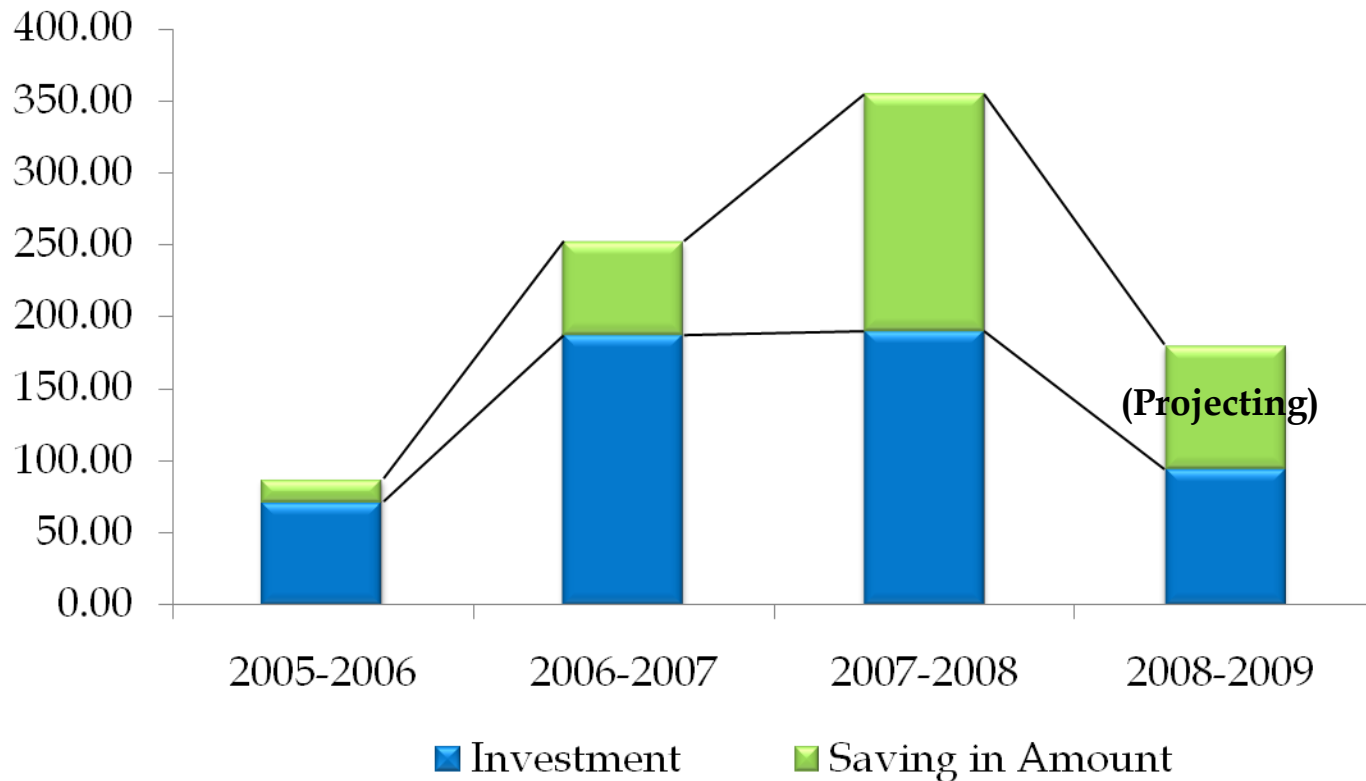
KWH/TONE





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Energy Saving Trend 2005-2008





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Energy Investment & Saving Trend 2005-2008

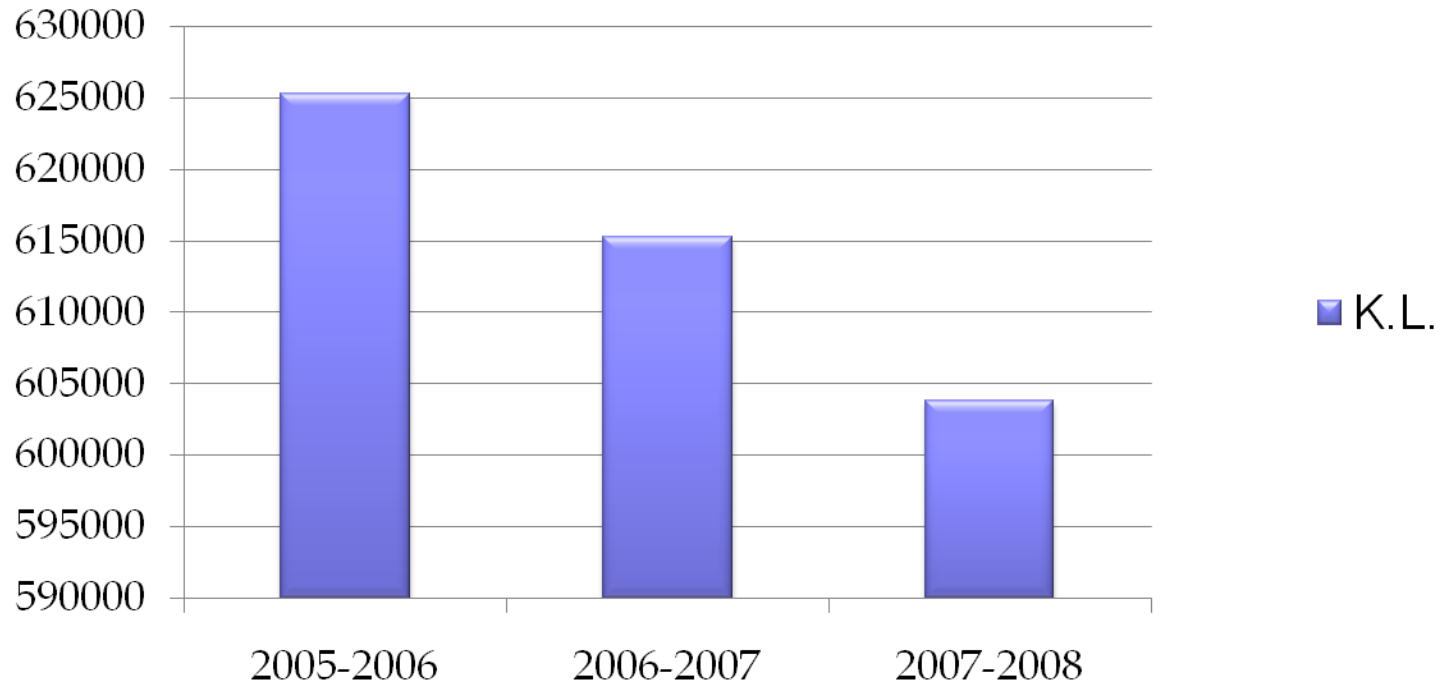
(Rs. In Lacs)

Year	Investment	Saving in Amount	Remarks
2005-2006	72.00	15.72	Done
2006-2007	187.84	64.44	Done
2007-2008	209.34	150.14	Done



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Water Consumptions & Saving Trend Through Monitoring 2005-2008





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Energy Efficiency Saving Aluminums Fan

AREA OF CONCERN

- ❖ Variable static pressure.
- ❖ Variable temperature & RH in department.
- ❖ High power consumption
- ❖ Life of FRP fans edges.

ACTION TAKEN

- ❖ High energy efficient light weight aluminum fan installed.
- ❖ Higher static pressure to improve efficiency.
- ❖ Over all 22 fans with motor reduced.



- ❖ Investment 55.45 Lacs
- ❖ Saving 63.80 Lacs/Annum



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Compressed Air Networks

AREA OF CONCERN

- ❖ Air pressure difference at generation & user point checked & it was + 1 kg/CM²
- ❖ Improper piping in complete mill.
- ❖ Old designed machines pneumatic kits.
- ❖ Air leakages.

ACTION TAKEN

- ❖ Reservoir capacity increased
- ❖ Latest available push fitting pneumatic kits of machines replaced with required O.H.
- ❖ Improper piping size corrected.
- ❖ Ring main system fabricated & installed.



- ❖ Investment 77.50 Lacs
- ❖ Saving 32.19 Lacs/Annum

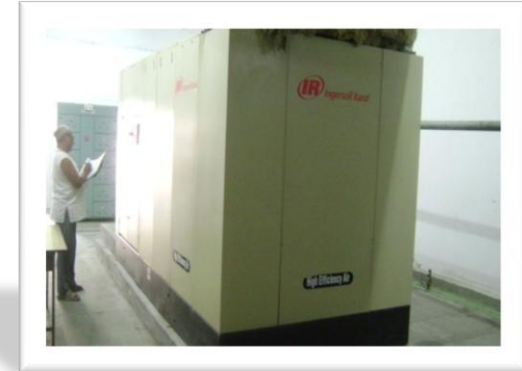


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Replacement Of Compressor

AREA OF CONCERN

- ❖ No. of existing compressor were more & taking high power consumption.



ACTION TAKEN

- ❖ A total air study done
- ❖ Total requirement of air calculated.
- ❖ A new compressor with new technology of two stage with modulation procured.
- ❖ Investment 32.12 Lacs
- ❖ Saving 37.02 Lacs/ Annum



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Energy Efficient Motor

AREA OF CONCERN

- ❖ After necessary modification in TFO machine 40 KW motor was running with load of 26 KW.



ACTION TAKEN

- ❖ Replace 40 KW motor with High Energy Efficient motor of 22 KW.
- ❖ Investment 5.60 Lacs
- ❖ Saving 13.32 Lacs/Annum



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Energy Efficient Motor

AREA OF CONCERN

- ❖ 7.5 KW motor with 84 % efficiency



ACTION TAKEN

- ❖ 7.5 KW motor replaced with 88 % Energy efficient motor.
- ❖ Investment 1.70 Lacs
- ❖ Saving 9.65 Lacs/ Annum



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TFO Pot Conversions

AREA OF CONCERN.

- ❖ With old technology spindle weight was more consuming more power.

ACTION TAKEN

- ❖ Light weight spindles installed with improved technology.
- ❖ Pot size reviewed as per requirement.



- ❖ Investment 28.51 Lacs
- ❖ Saving 17.99 Lacs/Annum



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Sieger Run On Steam

AREA OF CONCERN

- ❖ Yarn conditioning Sieger machine running on electrical heating system & consuming more power.



ACTION TAKEN

- ❖ After power study converted it in to steam heating
- ❖ With out Investment
- ❖ Saving 13.81 Lacs/ Annum



Rain Water Harvesting

AREA OF CONCERN

- ❖ Too much water crises.
- ❖ Continues water tanker procurement from out side.
- ❖ In side water level was down.

ACTION TAKEN

- ❖ Roof catchment's area properly designed with drain system.
- ❖ Ground drainage redesigned.
- ❖ Installed the Rain water filtration system & connected out let with well & Bore well.
- ❖ Significant water table increase noticed.



- ❖ Investment 2.85 Lacs
- ❖ Saving 12.40 Lacs/ Annum



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Echo Ventilators

AREA OF CONCERN

- ❖ High temperature in dye house.
- ❖ Excessive power consumption of big size exhaust fans by continue 24 Hrs running.

ACTION TAKEN

- ❖ Eco Ventilator installed by removing exhaust fans.
- ❖ Use of natural air circulation through eco ventilator.



- ❖ Investment 3.75 Lacs
- ❖ Saving 5.14 Lacs/ Annum



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Compressed Air Cleaning Nozzle

AREA OF CONCERN.

- ❖ Constant compressed air using for cleaning.
- ❖ Consuming more air with wastage of power.

ACTION TAKEN

- ❖ Pistol type with pressing lever air gun started to use.
- ❖ Waste air saving started.



- ❖ Investment 0.030 Lacs
- ❖ Saving 0.146 Lacs/Annum

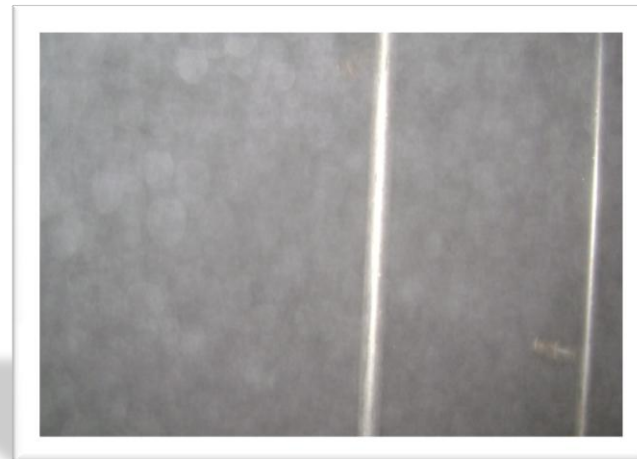


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High Pressure Fog System In Humidification Plant

AREA OF CONCERN

- ❖ High water consumption & Water Crises
- ❖ High TDSS
- ❖ Supply air duct / fan frame rusting
- ❖ Air pockets which is not supporting uniform RH in department
- ❖ High O/H Cost & Maintenance



ACTION TAKEN

- ❖ Installed FOG System in one tower
- ❖ Low maintenance
- ❖ Uniform RH in department
- ❖ Pump rating at lower side
- ❖ Cost of duct replacement
- ❖ Water Saving

- ❖ Investment 4.00 Lacs
- ❖ Saving 4.5Lacs/Annum



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Intelligent Motor Capacity Control

AREA OF CONCERN

- ❖ High power consumption in delta at low load.
- ❖ Motor need to replaced by low capacity.

ACTION TAKEN

- ❖ Installed Intelligent Motor Capacity Control for trail on 6 machine.
- ❖ Which run machines up to 60 % loading on star & soon it increase above than 60 %, it convert in delta.



- ❖ Investment 1.10 Lacs
- ❖ Saving 1.74 Lacs/Annum



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Use Of Solar Energy For Fiber Drying

AREA OF CONCERN

- ❖ Consumption of electrical & thermal energy for drying the moisturized fiber.

ACTION TAKEN

- ❖ Construct platform with proper chain link facing in open area under the sun rays.
- ❖ Saved thermal & electrical energy except rainy season.



- ❖ Investment 1.10 Lacs
- ❖ Saving 1.74 Lacs/ Annum



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On-line Power Monitoring System

AREA OF CONCERN

- ❖ Power consumption not in control and there is lot of variances and we are not able to find power consumption increased / decrease area.

ACTION TAKEN

- ❖ Procured on line power management
Installed our plant and result are satisfactory.



- ❖ Investment 6.0 Lacs
- ❖ Saving power consumptions in control



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